

Amendment to the Claims

This listing of claims will replace all prior versions and listings of claims in the above-referenced application.

Listing of Claims:

1-26. (cancelled)

27. (previously presented) A method for introducing cells into an animal to form tissue, comprising:

forming a cell-polymeric composition by mixing dissociated cells with a solution of a biodegradable, biocompatible natural or synthetic organic polymer;

introducing said cell-polymeric composition into the animal; and

following the step of introducing, hardening the polymer into a three-dimensional open-lattice structure which entraps water molecules to form a hydrogel containing the dissociated cells.

28. (currently amended) The method of claim [[25 or]] 27, wherein the natural or synthetic organic polymer is selected from the group consisting of alginate, polyphosphazines, polyethylene oxide-propylene glycol block copolymers, poly(acrylic acids), poly(methacrylic acids), copolymers of acrylic acid and methacrylic acid, poly(vinyl acetate), and sulfonated polymers.

29. (previously presented) The method of claim 28, wherein hardening comprises cross-linking the polymer with multivalent ions.

30. (currently amended) The method of claim [[25 or]] 27, wherein hardening comprises exposing the polymer to an agent selected from the group consisting of ions, pH changes, and temperature changes.

31. (previously presented) The method of claim 30, wherein hardening comprises allowing the polymer to interact with ions selected from the group consisting of copper, calcium, aluminum, magnesium, strontium, barium, tin, and di-, tri- or tetra-functional organic cations; anions selected from the group consisting of low molecular weight dicarboxylic acids, sulfate ions and carbonate ions.

32. (currently amended) The method of claim [[25 or]] 27, wherein the cells are selected from the group consisting of cells that form cartilage, cells that form bone, muscle cells, fibroblasts, and organ cells.

33. (previously presented) The method of claim 32, wherein the cells that form cartilage comprise chondrocytes.

34. (previously presented) The method of claim 32, wherein the cells that form bone comprise osteoblasts.

35-43. (cancelled)

44. (previously presented) A method for introducing cells into an animal to form tissue, comprising:

forming a cell-polymeric composition by mixing dissociated cells with a solution of a biodegradable, biocompatible natural or synthetic organic polymer;

introducing said cell-polymeric composition into the animal; and

hardening the polymer into a three-dimensional open-lattice structure which entraps water molecules to form a hydrogel construct in which the dissociated cells are uniformly distributed.

wherein the step of hardening is completed after introduction of said cell-polymeric composition into the animal.

45. (previously presented) The method of claim 44, wherein the natural or synthetic organic polymer is selected from the group consisting of alginate, polyphosphazines, polyethylene oxide-propylene glycol block copolymers, poly(acrylic acids), poly(methacrylic acids), copolymers of acrylic acid and methacrylic acid, poly(vinyl acetate), and sulfonated polymers.

46. (previously presented) The method of claim 44, wherein the step of hardening is initiated to partially harden the polymer before the step of introducing.

47. (previously presented) The method of claim 44 or 46, wherein hardening comprises cross-linking the polymer with multivalent ions.

48. (previously presented) The method of claim 44 or 46, wherein hardening comprises exposing the polymer to an agent selected from the group consisting of ions, pH changes, and temperature changes.

49. (previously presented) The method of claim 48, wherein hardening comprises allowing the polymer to interact with ions selected from the group consisting of copper, calcium, aluminum, magnesium, strontium, barium, tin, and di-, tri- or tetra-functional organic cations; anions selected from the group consisting of low molecular weight dicarboxylic acids, sulfate ions and carbonate ions.

50. (previously presented) The method of claim 44, wherein the cells are selected from the group consisting of cells that form cartilage, cells that form bone, muscle cells, fibroblasts, and organ cells.

51. (previously presented) The method of claim 50, wherein the cells that form cartilage comprise chondrocytes.

52. (previously presented) The method of claim 50, wherein the cells that form bone comprise osteoblasts.